

INDIA'S LEADING COMPANIES IN MANAGING WASTE



CII 3R AWARDS COMPENDIUM 2023

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MESSAGE

India is one of the fastest-growing economies worldwide. On this path of accelerated growth, the country is facing environmental challenges associated with sustainability and waste generation. This highlights the necessity to have an efficient waste management system and the adoption of effective practices by stakeholders, especially the industry, to mitigate the impact of waste generated on the environment and public health.

It is heartening to see that an increasing number of industries are adopting innovative and cost-effective approaches to manage waste and extract value-added products. This is strengthening the foundations of the circular economy in the country.

The Confederation of Indian Industry (CII), in its endeavour towards promoting industry sustainability, is undertaking various initiatives to help enterprises in controlling and minimising the environmental impact of their output. A special focus is placed on waste management and handling, as a part of the efforts to promote circularity. These initiatives are clubbed into a transformational movement known as the 'CII Waste to Worth Movement'.

As a part of the CII Waste to Worth Movement, CII instituted the 3R Awards in 2020. The objective of the award is to recognize and reward enterprises, startups and municipal corporations, which have embraced best practices for managing waste in India.

It is believed that these awards would create awareness amongst industry and municipal corporations, and encourage them to adopt new, innovative and better practices to manage and extract value from waste transformation, thereby minimizing the impact on the environment.

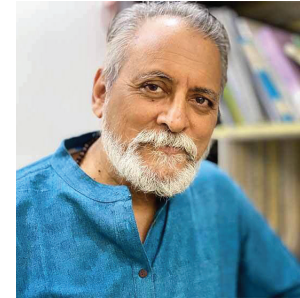
I am pleased to note that the recently launched 'CII Compendium of India's Leading Companies for Managing Waste' is emerging as an industry benchmark, showcasing the best practices in the 'Waste to Worth' transformation. The compendium contains profiles and best practices of waste management institutionalized by over 25 organizations across the country.

I congratulate all the municipal corporations, startups and industry members for contributing towards this compendium. Their efforts and active engagement in waste management initiatives play a vital role in propelling our country towards Net Zero in the coming decades, paving the way for a cleaner and healthier environment for future generations.

Chandrajit Banerjee

Director General

Confederation of Indian Industry (CII)



FOREWORD

Protecting the planet is everyone's responsibility as it is vital for our very existence. The CII 3R Awards since its inception in 2020 have been aiming to recognise the industry and start-ups for their commendable work in managing waste generated from their own activities; developing minimum/ zero waste yielding products; managing municipal solid waste; and in managing other urban wastes such as plastic and e-wastes under EPR strategies.

The awards also recognize the municipal corporations (MCs) which are effectively managing the municipal solid waste in respective cities/ towns.

The purpose of these awards is to encourage, recognize and reward best practices of industry, start-ups and municipal corporations in order to set a benchmark of excellence in waste management for large number of players to thrive to adopt these best practices and improve upon them.

Different industries, start-ups and municipal corporations have been encouraged to participate in the awards and the entries were evaluated by experts of the appraisal committees and further members of eminent jury.

This current compendium briefly presents waste management processes & best practices of 28 organisations which are winners and recipients of Merit Award of the CII 3R Awards 2022. It is expected to be a reference document for industry and start-ups to learn and understand best waste management practices and ecosystem that is embraced and practised by some of the fellow companies and start-ups in India.

I would like to sincerely thank members of the Grand Jury and experts for their continuous guidance and support for evaluating the industries, start-ups and MCs.

I must also thank industries, start-ups and MCs across the country for their participation in the awards and also there is a need for great institutional Partnership in public, private and civil society organizations to give a boost to innovations in circular economy.

It is an extremely important initiative by CII to encourage 3R (reduce, reuse and recycle) practices amongst the industry, start-ups and municipal corporation for managing the wastes and extracting values, thereby promoting principle of circular economy and help protecting the planet.

Prof Anil K Gupta

Chair, CII 3R awards 2023

Indian Scholar- Innovation and Padma Shri Awardee

ABOUT CII 3R AWARDS 2023

Whole world is adopting newer, innovative, cost-effective approaches and solutions to address the growing menace of Waste. It is important for a country like India, where the population is very large and waste management practices are not yet fully adhered adopts innovative and scientific management of waste that is socially, environmentally and commercially sustainable.

Many innovations and solutions are available and to some extent practised in many parts of the country by industries, start-ups and ULBs to manage Municipal Solid Waste (MSW). However, large scale implementation of solutions is yet to be seen.

Similarly, Indian industry have adopted and practised processes and solutions to encourage Reducing, Reducing and Recycling of plastic & packaging waste, e-waste and waste generated in industrial activities or waste generated from their own activities. Most of the industry follows stipulated guidelines of waste management through sanitary landfills and other processes. However, there are industry primarily MSMEs are yet to fully adapt such practices.

Industry is also conscious about the fact of waste generated by the consumers/users while consuming/using their products. Industry is in constant process of designing their products those will increasingly use non-polluting materials and will generate minimum waste at the users end. However, Industry's efforts in designing their products including its packaging are still not adequate.

It is important to capture and disseminate the best practices for others to follow and at the same time to recognise and reward the industry, start-ups and ULBs who have setup benchmarks in (1) managing waste generated in by industry from their own activities (2) designing, developing products those will generate minimal waste at the user's end, (3) managing Municipal Solid Waste (MSW), (4) managing plastic & packaging and e-waste, (5) Innovative Solutions by Start-ups for Sustainable Waste management, (6) Excellence in Innovation Solutions / technology by Research Institutes for Sustainable Waste Management and (7) Excellence of MSW management by ULBs.

With this background, CII under its waste to worth initiative, this year has announced 4th edition of 3R (Reduce-Reuse-Recycle) Awards to recognize and reward best practices of industry, start-ups and ULBs in order to set a benchmark of excellence in waste management for large number of industries to thrive to adopt these best practices.



INDIA'S LEADING COMPANIES IN
MANAGING WASTE



CII 3R AWARDS 2023 CATEGORIES

All the large industries, MSMEs and start-ups across the sectors can apply for below categories and sub-categories:

1. Excellence in Managing Municipal Solid waste by Industry
2. Excellence in Managing Municipal Solid waste by ULBs.
3. Excellence in Innovation Solutions or technology by Research labs/academic Institutes for Sustainable Waste Management.
4. Excellence in Innovative Solutions by Start-ups for Sustainable waste Management.
5. Excellence in 3R by Industry (Managing own waste)
6. Excellence in developing the zero / minimum waste products
7. Excellence in Best Practices managing plastics and packaging wastes under EPR

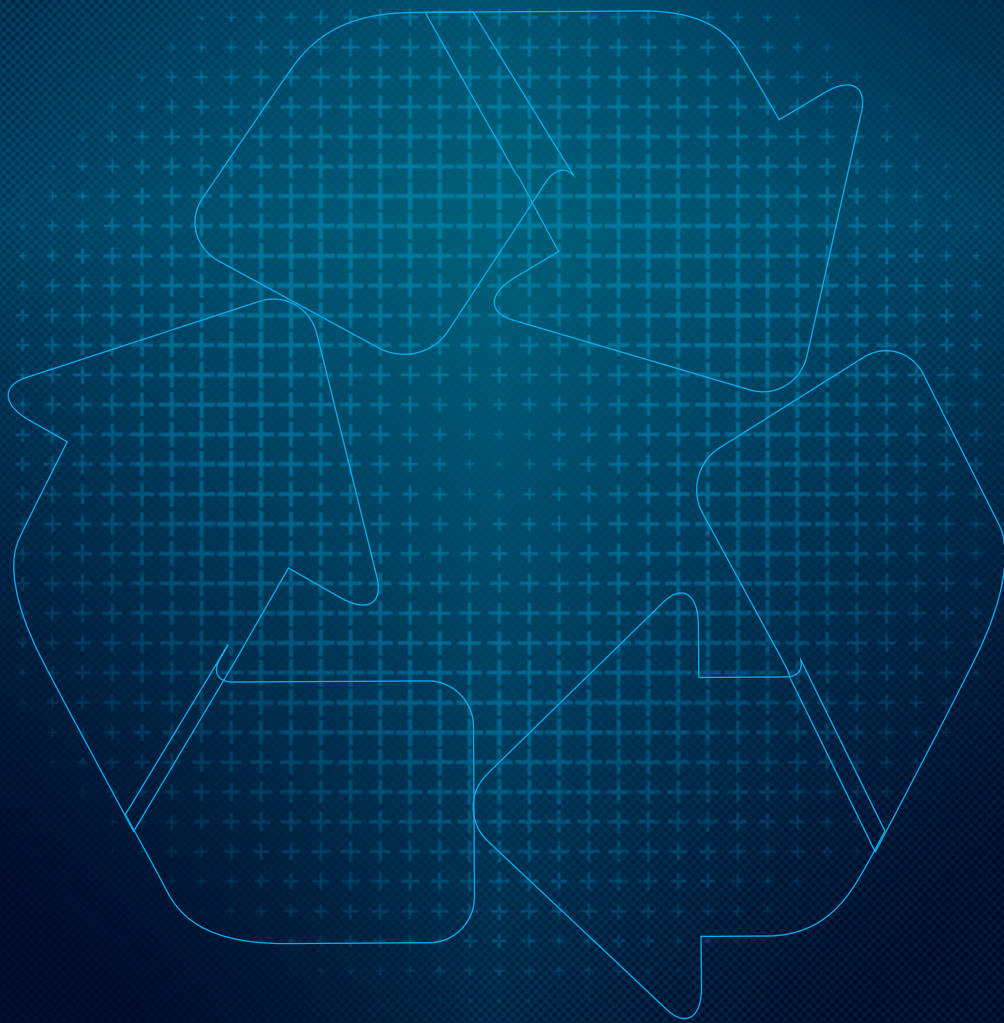
Sub-category:

- Producers, Importers, Brand Owners (PIBOs)
 - Public Responsibility Organizations (PROs)
 - Recyclers / Co-processors
8. Excellence in Best Practices managing E-waste under EPR

Sub-category

- Producers, Importers, Brand Owners (PIBOs)
- Public Responsibility Organizations (PROs)
- Recyclers / Co-processors

**AWARDEES OF CII 3R AWARDS 2023
- INDIA'S LEADING COMPANIES
MANAGING WASTE MOST
EFFICIENTLY**





Winners, Runner-ups and Recipients of Award of Merit: CII 3R Awards 2023

Excellence in MSW by Private Sector

1	Indian Pollution Control Association	Winner
2	Abellon Clean Energy Ltd.	Award of Merit

Excellence in Yielding zero/ minimum waste products

3	GRP Ltd.	Winner
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Excellence in 3R by Industry Managing own waste

4	JCB India Limited, Pune	Winner
5	Anupam Rasayan India Limited	Winner
6	JSW Steel Limited	Runner up

Excellence in Best Practices in managing Plastic & Packaging Waste

PROs

7	NEPRA Resource Management Private Limited	Winner
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Recyclers/co-processor

8	Pashupati Group	Winner
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Excellence in Best Practices in managing E- waste

E-waste-Recyclers/ co-processor

9	Re Sustainability Limited	Award of Merit
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E-waste -PIBO's

10	Blue Star Ltd.	Award of Merit
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Excellence in Innovative by Start-ups for Sustainable Waste management

11	Swaaha Resource Management Private Limited	Winner
12	GG Wastech Private Limited	Winner

Excellence in Research Labs/Industry/Academics Institution

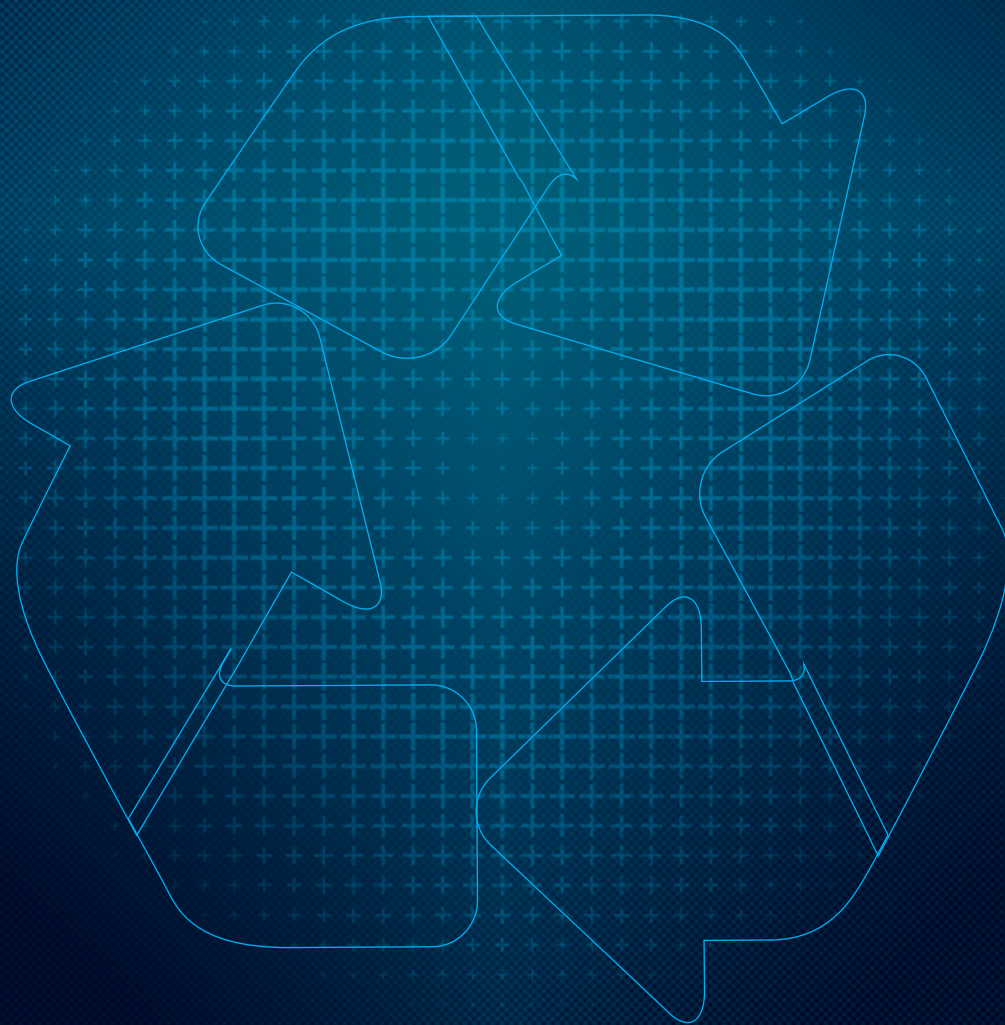
13	CSIR-AMPRI, Bhopal	Winner
14	CCRT Laboratories	Runner up
15	CSIR-Indian Institute of Chemical Technology, Hyderabad	Award of Merit

Excellence in Managing Municipal Solid waste by Municipal Corporations

16	Municipal Corporation, Patan	Winner
17	Municipal Corporation, Ambikapur	1 st Runner up
18	Municipal Corporation, Raigarh	2 nd Runner up



'RECEIPT OF APPRECIATION' FOR CII 3R AWARDS 2023





Appreciation Award: CII 3R Awards 2023

Excellence in 3R By Industry manage own waste

1	Bisleri International Pvt. Ltd.	Appreciation
2	Balrampur Chini Mills Ltd.	Appreciation
3	Orchid Pharma Limited	Appreciation

Excellence in Research Labs/Industry/Academics Institution

1	IIT Mumbai	Appreciation
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Excellence in innovative solutions by start-ups for Sustainable Waste management

1	Plasticycle green foundation	Appreciation
2	Deccan Crest Engineering Pvt. Ltd. (DCEPL)	Appreciation

Excellence in managing Municipal Solid waste by Private Sector

1	JBM Environment	Appreciation
2	Nashik Waste Management Private Limited	Appreciation

Excellence in yielding Zero/ Minimum Waste Products

1	Gencrest Bio Products Pvt. Ltd.	Appreciation
2	Bilva Enterprises	Appreciation

Excellence in Best Practices in managing Plastic & Packaging Waste - PIBOs

PIBOs - Plastics

1	The Coca-Cola Company	Appreciation
2	Bisleri International Pvt. Ltd.	Appreciation

Excellence in Best Practices in managing e-waste - PIBOs

PIBOs E-Waste

1	Blue Star Ltd.	Appreciation
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Indian Pollution Control Association

Winner

Category: Excellence in Managing Municipal Solid Waste by Private sector



About the Company

IPCA is an NGO working in the realm of waste management, air quality monitoring, environmental education & awareness and upliftment of waste picker community since 2001. IPCA is enlisted with CPCB and appointed as expert committee member in various committee constituted by Central & State Governments. IPCA is pioneer in executing EPR action plan for plastic waste & having pan India operation for collection of plastic waste. IPCA is also implementing decentralized solid waste management system at institutions since 2001.

Best Practises



IPCA has implemented a unique model of Integrated Solid Waste Management for Bulk Waste Generators in Shahdara South Zone, Municipal Corporation of Delhi (MCD). Under this campaign, IPCA is making the societies zero waste by handling the organic waste at source and providing the services of dry waste collection & transportation for further segregation and recycling. The campaign kick-started on April 12th, 2023 and so far, 100+ societies have become zero waste under this with the participation of over 15000 households. Under this

unique model, IPCA is installing one Aerobin Composter (capacity 400 L) per 35 households and on an average 12-15 kg/day of organic waste can be added into it for 40-45 days. IPCA is also training & building the capacities of housekeeping staff & waste workers on solid waste management and handling of composters. MCD Shahdara South Zone is providing administrative support in the implementation of the campaign.

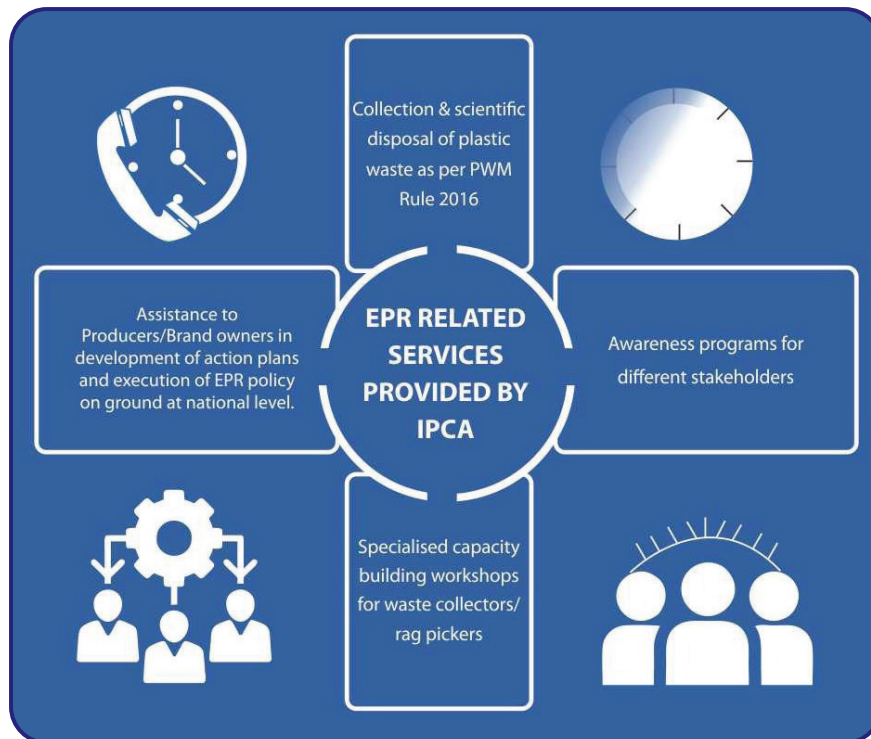
Under this campaign, every day nearly 4 MT of organic waste is being treated, approx. 8 MT of dry waste is being collected and channelized





for recycling & in total nearly 12 MT of solid waste is being prevented from going to the landfills. A total of 1,47,660 kg/month of organic waste is being channelized for composting and nearly 29,000 kg of compost is harvested through the Aerobins in a month. Nearly 1,30,000 kg/month of dry waste is collected and transported to IPCA's Material Recovery Facility for further segregation. IPCA is channelizing the plastic waste to its own plastic recycling facility where low-value plastic waste is recycled into plastic chip boards which are converted into utility products and other dry

waste channelized to their respective authorised recyclers. The action plan that this model has utilized is unique in itself and is running sustainably. Other societies are also joining in the campaign organically. This campaign is improving the skills of waste workers and impacting their per capita income. By mid of August, it is planned to make 300 RWAs zero waste. The campaign is also reaching to other zones of MCD and have started enrolling societies in Keshav Puram Zone. The emphasis continues on minimizing or eliminating waste that goes to landfills.



Abellon

Abellon Clean Energy Ltd.

Award of Merit

Category: Excellence in Managing Municipal Solid Waste by Private sector



About the Company

Abellon Clean Energy Ltd. is a pioneer in the Waste-to-Energy sector in India, with a vision to contribute to nation building through sustainable energy solutions for Power, Heat and Transport.

Best Practices

Abellon has successfully established and commissioned its maiden Waste-To-Energy (WTE) Plant at Jamnagar since November-2021. It processes 600 TPD of Municipal Solid Waste (MSW) and generates 7.5 MW electricity which is sold to the state-owned distribution company-GUVNL. By utilizing about 1 MLD Sewage Treated Water (STP) instead of fresh water for process requirement, Abellon is showcasing leadership in the sector and also avoid pollution due to discharge of STP water in sea.

Jamnagar city with population of 6.5 Lacs generates about 250 TPD MSW which was earlier openly dumped in an unorganized manner. With the establishment of Abellon's WTE Plant, this MSW is instead processed at the Plant without spreading odour & pathogen with minimal human intervention in the shortest possible time. It is also capable to accommodate any future increase in MSW generation due to growth in population. Today, Abellon WTE Plant receives waste from neighboring cities as well like Dwarka, Porbandar, Rajkot, etc.

The Plant can also process waste collected from Bio-mining activities without further modification so that city dumpsites can be remediated under the Swachh Bharat Mission.



The campus is designed to accommodate all wide value chain from collected MSW i.e. Biogas Plant, range of construction products includes fly ash bricks, pavers, etc. from ash generated while processing MSW.

By studying the field of waste handling and management for 10+ years, Abellon has configured the entire process and patented vide Patent No. 201621023135 dated 04.06.2021.

Abellon is in the process of establishing 3 more such WTE plants at Rajkot, Vadodara and Ahmedabad each processing 1200 TPD MSW & generate 14.9 MW electricity upon commissioning in 2024 Year.



GRP Limited

Winner

Category: Excellence in Yielding zero/ minimum waste products



About the Company

GRP Limited started its journey to supply sustainable materials in 1974 and over the years developed multiple products that share a common objective to minimise or eliminate waste. The company's primary emphasis remains on utilizing 100% of end-of-life tires (EoL) across product categories.

GRP's holistic approach of design, material selection, manufacturing, packaging etc., strives to embrace newer EoL materials such as plastics; conserve resources through use of renewable energy, reusable packaging; offer products with superior benefits such as durability, longevity, and improve cost savings to customers by replacing virgin materials to reduce waste generation and enhance value creation.

Best Practices

- a) Reclaim Rubber: Blended with virgin rubber for better quality and cost savings, GRP's reclaim rubber reduces consumption of natural and synthetic rubber. By products from the process are used as raw materials in other verticals.
- b) Engineering Plastics: GRP is first Indian company to commercialize the concept of recovery and reuse of polyamide from EoL tyres. The vertical not uses use EoL tyres but also waste streams such as textile waste, fishnets etc., to offer durable materials that find uses across diverse industries. Waste generated in this business can be 100% reused in the same process again.



- c) Custom Die Forms: Products from this vertical are used for absorbing vibration in heavy equipment and provide insulation against sound and impact. Reuses EoL tyres with minimal energy need and reduces usage of virgin materials. By products of this vertical are used as raw material in Engineering Plastics and Reclaim Rubber businesses.
- d) Polymer Composite: Produced using 100% recycled rubber and plastics, replacing wood, steel, and concrete. Reduces carbon footprint and is more durable and stronger vis-à-vis wood. Waste generated in this business can be 100% reused in the same process again. The final product made comes back to value chain.
- e) Repurposed Polyolefins: Vertical upcycles EoL polyolefin packaging into raw materials with product performance equivalent to virgin materials. The final product made is recyclable and comes back to same value chain, hence closing the loop.

GRP
IMPACT POSITIVE

PRODUCING SUSTAINABLE MATERIALS FOR A CIRCULAR ECONOMY

- GRP RECLAIM RUBBER**
- GRP ENGINEERING PLASTICS**
- GRP CUSTOM DIE FORMS**
- GRP POLYMER COMPOSITE**
- GRP REPURPOSED POLYOLEFINS**

60+ COUNTRIES | 400+ VENDORS
300+ CUSTOMERS | 20 DISTRIBUTORS
5 MANUFACTURING LOCATIONS

sales.rr@grpweb.com / sales.rp@grpweb.com | www.grpweb.com

GRP
IMPACT POSITIVE

GRP is an integral part of a circular economy model,
facilitating a continuous cycle

that benefits everyone & supports the principles of sustainability
within the circular economy.



JCB India Limited, Pune

Winner

Category: Excellence in 3R by Industry Managing own waste



About the Company

The story of JCB is one of innovation, ambition and sheer hard work. From small beginnings building agricultural tipping trailers in 1945 to the global force in manufacturing the company has become today, JCB has constantly pushed the boundaries in our desire to be the best. My father and company founder Joseph Cyril Bamford's motto was, "Jamais content", and that is exactly right – JCB never content with our achievements. But I believe that even he would be amazed by what the company has become. Today, JCB have 22 plants on four continents and more than 750 dealers around the world.

These are exciting times. In just 67 years JCB have gone from one man in a garage in Uttoxeter to major global brand renowned for its pioneering spirit. All of this is down to our people – a 10 000-strong worldwide force that makes up the JCB family so proud of. Our achievements over the past 67 years have been considerable, but at JCB believe in always looking ahead to the next development, the next level of success. JCB is continuing to innovate and push the boundaries in research and development; in particular within the area of sustainability, where energy costs and emissions are becoming an increasingly important purchasing consideration. Many of our customers will need to reinvent their businesses to meet new building standards and emissions legislation, and JCB there to support them every step of the way, as we have always been.

Best Practices

Environmental Impact: Embracing 3R principles is vital for environmental sustainability. By reducing waste generation, reusing materials, and promoting recycling, organizations can significantly minimize their ecological footprint, conserve natural resources, and reduce pollution, contributing to a greener and cleaner environment.





Corporate Social Responsibility (CSR): Demonstrating commitment to waste management aligns with an organization's CSR initiatives. It showcases a genuine concern for the environment and the well-being of society, enhancing the company's reputation and fostering trust among stakeholders, including customers, investors, and employees.

Cost Savings: Adopting 3R practices can lead to substantial cost savings for businesses. By reducing waste, companies can cut disposal expenses and decrease the need for raw materials, thereby reducing procurement costs. Reusing and recycling materials also help in conserving resources and mitigating rising material prices.

Innovation and Efficiency: Participating in the "Excellence in 3R by Industry" drives organizations to innovate and implement efficient waste management practices. This encourages research and development of sustainable technologies and processes, fostering creativity and competitiveness in the industry.

Regulatory Compliance: With increasing focus on environmental regulations and sustainability measures, participating in the award ensures that organizations stay updated on the latest waste management standards and comply with regulatory requirements.

Collaboration and Knowledge Sharing: The award offers a platform for organizations to collaborate and share best practices in waste management. By networking with other participants and industry experts, companies can gain valuable insights and learn from each other's experiences, leading to continuous improvement in waste management processes.

Employee Engagement: Engaging employees in waste management initiatives fosters a sense of responsibility and ownership among the workforces. Participation in the award can serve as a platform to encourage employee involvement in sustainability efforts, leading to a more motivated and environmentally conscious workforce.

In conclusion, participating in the CII "Excellence in 3R by Industry" award provides numerous benefits, ranging from environmental conservation and cost savings to enhanced reputation and employee engagement. It serves as a catalyst for driving positive change in waste management practices and fostering a more sustainable future for businesses and society as a whole.





ANUPAM RASAYAN INDIA LTD.

Anupam Rasayan India Limited

Winner

Category: Category: Excellence in 3R by Industry Managing own waste



About the company

Anupam Rasayan India Limited is one of the leading companies engaged in the custom synthesis and manufacturing of specialty chemicals in India. Our business verticals are (i) life science related specialty chemicals comprising products related to agrochemicals, personal care and pharmaceuticals, and (ii) other specialty chemicals, comprising specialty pigment and dyes, and polymer additives. With our customers at the heart of everything we do, our focus is to manufacture products with sustainability using our continuous process technology through flow chemistry and photo chemistry, greater R&D and engineering capabilities to deliver values for our customers for their complex and multi-step synthesis projects.

India is determined to minimize waste by practicing the concept of 3R (Reuse, Recycle, Recover) with the best of the group's knowledge and resources.

ARIL continuously strive to achieve the best sustainable practices through research and technology.

Best practices

As a responsible chemical manufacturer, M/s. Anupam Rasayan India Limited is committed to minimizing waste through the implementation of the 3R concept—Reuse, Recycle, and Recover—utilizing the best available knowledge and resources within the group. The company diligently works towards achieving sustainable practices through continuous research and technological advancements. Notably, our facilities are equipped with state-of-the-art Soil Bio-Technology (SBT) to effectively address excess Chemical Oxygen Demand (COD) and phenolic compounds.

In line with our commitment to environmental stewardship, one of our plants features a zero-liquid discharge system, contributing to the promotion of a circular economy and the ecologically sound management of liquid waste. An integral part of our waste management strategy involves diverting 100% of process sludge and residue from landfills and incineration,



instead channelling them to the cement industry for co-processing as an alternative resource, reflecting our dedication to eco-friendly waste reduction practices.

Furthermore, Anupam Rasayan India Limited embraces the reuse of spent sulfuric acid (coproducts/ Hazardous Waste) in cement industries as a raw material, showcasing our commitment to resource efficiency. To further enhance our eco-friendly initiatives, recycle up to

70% of process effluent after necessary treatment, reducing our environmental footprint.

Our commitment to sustainability extends beyond internal practices, as evidenced by our endeavours to contribute to the betterment of the surroundings. Notably, ARIL have acquired significant land areas, including 20,000 square meters in Jaghadia GIDC and 150 hectares in the Surat and Bharuch region, dedicated to green belt area development. Through these initiatives, M/s. Anupam Rasayan India Limited aims not only to meet but exceed environmental standards, ensuring a positive impact on both internal operations and the broader community

In addition to our strong commitment to environmental sustainability, M/s. Anupam Rasayan India Limited has demonstrated significant cost effectiveness through the adoption of 3R practices. In the fiscal year 2021-22, our strategic implementation of the 3R principles resulted in substantial savings of 1132.57 lacs, further emphasizing the economic benefits derived from responsible waste management. Building on this success, the subsequent fiscal year, 2022-23, witnessed even greater financial savings, totalling 1148.96 lacs. These impressive figures underscore the synergistic relationship between environmental responsibility and cost efficiency at Anupam Rasayan India Limited, showcasing the tangible advantages of our dedication to sustainable practices. As we continue to innovate and invest in environmentally friendly technologies, the company remains committed to achieving a harmonious balance between ecological stewardship and financial prudence.





JSW Steel Limited

Runner Up

Category: Excellence in 3R by Industry Managing own waste



About the company

JSW Steel has always been at the forefront of research and innovation. It has a strategic collaboration with global leader JFE Steel of Japan, enabling JSW to access new and state-of-the-art technologies to produce & offer high-value special steel products to its customers. These products are extensively used across industries and applications including construction, infrastructure, automobile, electrical applications, appliances, etc. JSW Steel is widely recognized for its excellence in business and sustainability practices. Some of these recognitions include World Steel Association's Steel Sustainability Champion (consecutively 2019 to 2021), Leadership Rating (A-) in CDP (2020), Deming Prize for TQM for its facilities at Vijayanagar (2018) and Salem (2019). It is part of the Dow Jones Sustainability Index (DJSI) for Emerging Markets (2021) and S&P Global's Sustainability Yearbook (consecutively for 2020 and 2021). JSW Steel is the only Indian company to be ranked among the top 15 global steel producers by World Steel Dynamics for 13 consecutive years since 2008. As a responsible corporate citizen, JSW Steel's carbon reduction goals are aligned to India's Climate Change commitments under the Paris Accord.

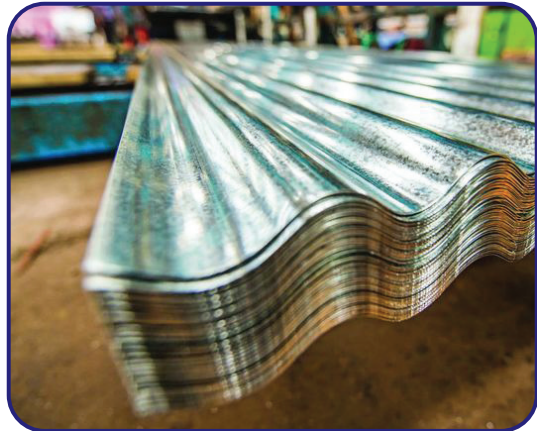
JSW Steel's 10 MTPA Integrated Steel Plant at Dolvi, Maharashtra is based on BF- BOF route as well as BF-EAF (CONARC) route for production of crude steel and our key products are Hot Rolled Coils and TMT bars.

Best practices

During the steel manufacturing process, different kinds of wastes are generated at different stages in the form of dust, sludge, skull, scale and slag. Approximately 630 kg of wastes are generated per tonne of crude steel produced. Constituent-wise these wastes are of mainly three types viz. iron bearing, carbon bearing and flux bearing waste materials and mostly re-used as raw materials in agglomeration units for sinter and pellet making.



The Blast furnace slag generated during the iron-making process is sold for cement manufacturing. The slag generated from Electric Arc Furnace, Basic Oxygen Furnace and Kanbara Reactor during primary steel making are processed in metal recovery plants for separation of metallic and non-metallic constituents. The metallic constituents are reused in steel making and non-metallic part is used in different applications like, as flux in steelmaking, filling of low lying areas etc. Ladle furnace slag - generated during the secondary steel making process is converted into briquettes and are used in the steel making process.



100 % utilization of non-metallic steel slag is a major challenge for steel industries and JSW steel Dolvi is undertaking steps towards sustainable road construction utilizing this slag, in association with the Central Road & Research Institute (CRRI). The construction of a 1 KM concrete road using approximately 16,000 tons of EAF slag as aggregates on the National Highway 66 (Mumbai-Goa) has been completed with technical support from CRRI. The result of TCLP tests conducted also establishes that the slag is safe for road application and is suitable for use as aggregates in different layers of bituminous roads. This project is first of its kind in

India and with the success of this project, CRRI has approved the use of slag aggregates in Dry lean concrete and Pavement Quality Concrete on concrete roads.

JSW Steel are equally focused on reduction of waste generation per ton of crude steel production, from our processes along with 100 % utilization of wastes. Through these recycling initiatives JSW Steel have adopted a closed-loop or circular economy approach for waste management.



NEPRA Resource Management Private Limited

Winner

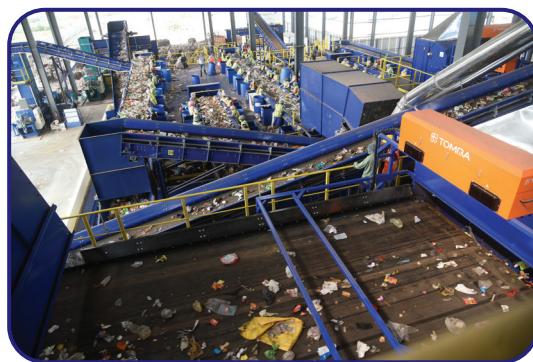
Category: Excellence in Best Practices in managing Plastic & Packaging Waste as a PROs



About the Company

NEPRA is India's leading waste management and sustainability company which operates Pan India and has its head office in Ahmedabad, Gujarat. NEPRA's core focus is on People, Process and Infrastructure.

NEPRA currently operates under two models: City Level Dry Waste Management organization and a Producer Responsibility Organization (PRO) operating Pan-India.



NEPRA collects all types of dry waste from Urban Local Bodies (ULBs), different waste generators and aggregators like waste pickers, educational institutions, commercial establishments, residences etc.

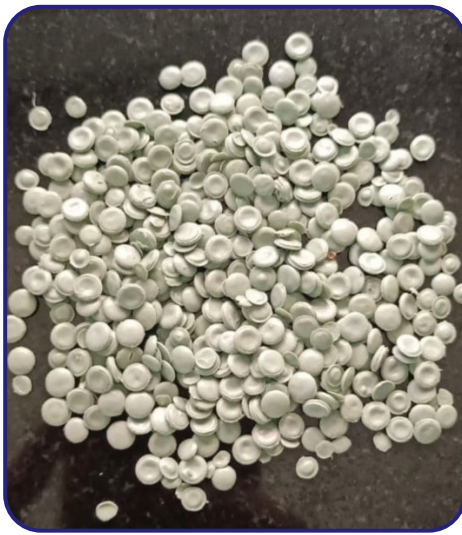
The company is a pioneer in designing, building and operating MRFs (Material Recovery Facilities) and currently operates MRFs in the cities of Indore, Ahmedabad, Pune, Jamnagar and Vapi. NEPRA operates these MRFs in a PPP (Public Private Partnership) Model with local governments and authorities.

NEPRA as a PRO under EPR (PWM Rules, 2016) currently facilitates over 150+ PIBOs across India and has helped them meet their EPR targets. With each amendment implemented, NEPRA has identified challenges in its execution and taken steps to mitigate it. It collects plastics- recyclables such as flexible, rigid and non-recyclables like MLP including packaging waste. The SOPs are defined as creating a perfect balance of demand and supply chain of each plastic category.





NEPRA's 'EPR Connect' helps to streamline EPR processes for PIBOs, WMA, PCBs and Plastic Waste Processors on a common platform. It creates a simple and fast interface that manages the entire audit life cycle from waste collection to its sustainable end disposal. This innovation has helped in achieving ease in data maintenance and reporting, transparency and ensuring compliance on time. Through its several initiatives, NEPRA is addressing the challenge of waste management and striving to make cities in India 'Zero Waste', working in line with the Swachh Bharat Mission (SBM), India's Net-Zero commitment and UN's Sustainable Development Goals (SDGs).





Pashupati Group

Winner

Category: Excellence in Best Practices in managing Plastic & Packaging Waste as a Recycling/co-processing



About the Company

Pashupati Group of Industries stands as a beacon of innovation, spearheading the fight against global plastic pollution for the past two decades. Our cutting-edge technology and processes empower us to collect, segregate, and recycle plastic waste into a diverse range of high-value products, including rPET food-grade, non-food-grade, odor-free rPolyolefin granules-Food grade /Non- food grade, specialty recycled fibers and innovative recycled packaging solutions.

Best Practices

Pashupati Group breathe new life into plastic waste, transforming it from pollutant to a valuable resource. As a responsible waste processor, deeply committed to environmental protection, employing advanced machinery and skilled manpower to optimize waste transformation while minimizing our ecological footprint.

Research and development are the cornerstones of our operations, ensuring Pashupati Group remain at the forefront of technological advancements. Pashupati Group steadfast in our dedication to creating a circular economy, a crucial step towards conserving our environment for future generations.

With eight production facilities spread across India, approaching a boasting a processing capacity of 3, 00,000 T/ per year and over 3,000 direct and indirect employees, steadily progressing towards becoming a waste-neutral group of industries. Pashupati Group ensure 100% process waste recycling, and all our units adhere to controlled emissions, demonstrating our unwavering commitment to environmental stewardship.

Our robust waste collection network, unwavering compliance with respect corporate governance and with extended producer responsibility (EPR), and unwavering focus on traceability, zero liquid discharge (ZLD), and waste-to-wealth conversion through sustainable closed-loop solutions make us an ideal partner for consumers and brand owners alike.

Pashupati Group paving the way for sustainability, meticulously crafting a robust portfolio of stringent compliances, focused on R&D, use of state of the art technology, robust production process and comprehensive certifications for our recycled plastics, establishing Pashupati as the brand owners "FIRST CHOICE".

Award of Merit



Re Sustainability Limited

Award of Merit

Category: Excellence in Best Practices in managing E- waste as an E-waste Recycler/co-processor



About the Company

Re Sustainability Limited (ReSL), a KKR-backed company, is one of Asia's leading providers of comprehensive environmental management services.

ReSL offers a whole gamut of environmental services and infrastructure solutions under various categories such as waste management (hazardous, municipal, and biomedical), MAR POL, construction waste, and e-waste; waste to energy; recycling (sewage, paper, plastic, and integrated waste); environmental solutions (remediation, ETPs, and wastewater treatment); automated car park management; and facilities management.

Best practices

Recycling:

Re Sustainability Limited currently operates three state-of-the-art plastics recycling facilities strategically located in Hyderabad, Visakhapatnam, and Raipur. Our combined monthly capacity of 750 metric tons underscores our commitment to effectively managing plastic waste from diverse sources, encompassing pre-consumer, post-consumer, and industrial streams while accommodating both flexible and rigid plastics.



Plastics Recycling Plant

Our facilities, equipped with world-class infrastructure, exemplify excellence in recycling processes. Re Sustainability Limited specialize in producing premium plastic granules tailored for sophisticated packaging applications, alongside the manufacture of biomedical waste and garbage bags—underscoring our holistic approach to sustainable waste management.

In parallel, we are diligently establishing a network of collection centers and material recovery facilities. These pivotal components play a crucial role in the systematic gathering, meticulous segregation, and efficient processing of high-quality scrap, forming the backbone of our recycling operations.

In pursuit of operational efficiency and sustainability, we introduce ReeLoop—a cutting-edge digital platform. ReeLoop not only facilitates the digitalization of the informal sector but also ensures rigorous track and traceability throughout the material life cycle. From initial collection to the meticulous manufacturing of end products, ReeLoop empowers us to monitor, analyze, and optimize every stage of our processes, aligning with our unwavering commitment to a circular and environmentally responsible paradigm in plastics recycling.

Re Sustainability Reldan Precious Metal Refinery

Re Sustainability Reldan is actively combatting the escalating issue of electronic waste (e-waste) through its cutting-edge approach at its Leed Platinum-rated precious metal refinery and recycling plant. The facility, sprawling across 100,000 square feet, stands as a pivotal solution to the challenges posed by the rapid proliferation of e-waste, a burgeoning problem globally.



In a world where technology's swift evolution leads to a surge in unwanted and discarded electronic devices, the annual growth of e-waste averages at 2 million metric tons. Notably, China, the United States, and India emerge as the foremost contributors to this mounting predicament. Alarming statistics from 2022 reveal a staggering 59.4 million metric tons of e-waste generated worldwide, with a mere 17.4% of this massive volume being properly collected and recycled.

The Re Sustainability Reldan facility is a beacon of environmental responsibility and a catalyst for sustainability, especially within the realms of electronics and precious metal manufacturing. Meticulously designed with an emphasis on minimizing environmental impact, the facility employs sustainable materials, energy-efficient architecture, and advanced technologies. Noteworthy features include solar panels with a capacity of 515 kVA, underscoring the commitment to maximizing sustainability and reducing the carbon footprint associated with electronic waste processing.



INDIA'S LEADING COMPANIES IN
MANAGING WASTE



BLUE STAR

BUILT ON TRUST®

Blue Star Ltd.

Award of Merit & Appreciation

Category: Excellence in Best Practices in managing E- waste as an E-waste - PIBO



About the company

Blue Star is committed to sustainable practices, actively reducing E-Waste generation, and adhering to environmental regulations. The company is fully compliant with RoHS (Reduction of Hazardous Substances) norms as per E-Waste Management Rules 2022, ensuring all suppliers meet these requirements. The phased-out production of R22-based air conditioners surpasses the government's deadline. Defective products are responsibly recycled through authorized channels, with 570.832 MT recycled in FY 2023.

Best Practices

Dedicated storage areas for E-Waste are provided, and refurbishment centers in Chennai and Mumbai are being established for repairing and reusing damaged printed circuit boards. Electronic Repair Centers in major offices further contribute to electronic board repair and reuse. Each E-Waste recycling form is meticulously checked, and all sourced materials are from approved suppliers.



Blue Star is environmentally conscious in refrigerant use, complying with Ozone Depletion Substance rules. Energy conservation efforts include manufacturing inverter-based air conditioners and 5-star and 4-star rated ducted split air conditioners and chillers. The company actively prevents informal E-Waste recycling, curbing land, air, and water pollution.

Engaging 25 trucks with a total load of 8 MT provides livelihood for 50 drivers and helps, preventing child employment and safeguarding women from toxic E-Waste exposure. Blue Star maintains 100% compliance with conversion factors specified by the CPCB for iron, copper, and aluminum. The company's policy revision prioritizes E-Waste management as a prime requirement for business partners, emphasizing its commitment to sustainability across the supply chain.



Swaaha Resource Management Private Limited

Winner

Category: Excellence in Innovative by Start-ups for Sustainable Waste management



About the company

Swaaha Resource Management Private Limited is an Indian Non-Government Company.

Best Practices



The Shri Amarnathji Yatra, a spiritual pilgrimage of profound significance, has been graced by millions of devotees seeking divine blessings of Baba Barfani amidst the enchanting Himalayan mountain ranges. However, the increasing footfall of pilgrims brought forth environmental challenges, necessitating a sustainable approach to preserve the sanctity of the Yatra route. In a remarkable collaboration, the Directorate of Rural Sanitation, Jammu

& Kashmir, and Swaaha Resource Management Private Limited, Indore, united to execute the Implementation of Sustainable and Zero Landfill Shri Amarnathji Yatra 2023. This article delves into the extraordinary endeavours that have redefined responsible waste management and upheld the spirit of environmental stewardship.

A robust and integrated solid waste management system became the cornerstone of the project's success. The meticulous collection, segregation, and scientific processing of waste were prioritized to minimize the ecological impact of the yatra. The hallowed Himalayan region deserved reverence and protection. To ensure the preservation of its pristine beauty, the project aimed to leave no waste on the mountains, valleys, rivers, or the yatra route. The mission to achieve zero landfill extended beyond aspiration. Dedicated efforts focused on diverting waste from landfills through recycling and sustainable waste disposal practices. Effective Information, Education, and Communication (IEC) tools were employed to enlighten

yatris, langar operators, shopkeepers, service providers, and government officials about the significance of responsible waste management.

To optimize waste management efficiency, a network of 13 camps was strategically established to cater to pilgrim needs and ensure waste disposal conformity. Through innovative IEC tools, waste was diligently segregated at its source into dry/inorganic/recyclable and wet/organic/biodegradable categories, promoting eco-conscious practices. Each SWM Facility featured two distinct sections: a composting unit that skillfully converted wet waste into organic compost, and a Material Recovery Facility (MRF) for sorting and baling dry recyclables like PET, HDPE, LDPE, PP, Paper, Cardboard, Metal, and Glass.

Pioneering ingenuity addressed the challenge of higher altitudes, where electricity was scarce. Specially crafted manual machines operated without electricity, ensuring waste management excellence. The Baltal base camp bore witness to an awe-inspiring feat - the world's first sustainable langar. Every day, prasada was lovingly served to yatris, while culinary excellence embraced environmental consciousness. Food



waste from the langar transformed into valuable biogas through an innovative organic waste to biogas plant. This renewable biogas fuelled the cooking stoves, reducing carbon emissions. Harnessing the abundant Himalayan sunlight, the langar embraced a Scheffler solar concentrator, a solar-powered solution that significantly reduced reliance on conventional energy sources. Resourceful utilization of biomass pellets empowered the langar's biomass kitchen, proving that sustainability and spiritual nourishment can intertwine. To meet hot water requirements for cooking, a solar water heater celebrated renewable energy as a key contributor to the langar's eco-friendly practices.

Processing of 180 MT of food waste averted 342,000 kg of CO₂ equivalent GHG emissions. Recycling more than 42 MT of PET resulted in a saving of around 63,000 kg of CO₂ equivalent GHGs. Baling around 40 MT of paper, cardboard, and tetra pak saved approximately 24,000 kg of CO₂ equivalent GHGs. The Sustainable Langar's ingenuity has saved 840 kg of LPG (60 bottles), promoting a greener energy landscape.

The Implementation of Sustainable and Zero Landfill Shri Amarnathji Yatra 2023 has etched a milestone in the annals of environmental preservation. The dedicated efforts of the Directorate of Rural Sanitation and Swaha Resource Management Private Limited have set a precedent for responsible pilgrimage management, intertwining spiritual reverence with ecological care. As the pilgrims embark on their sacred journey, they can take solace in the knowledge that their footsteps have treaded lightly, leaving an indelible mark of environmental stewardship. This trailblazing initiative will inspire future generations to uphold the sacred bond between spirituality and sustainability, safeguarding the pristine beauty of the Himalayan region for eternity.



GG Wastech Private Limited

Winner

Category: Excellence in Innovative by Start-ups for Sustainable Waste management



About the company

GG Wastech Pvt. Ltd. is a start-up organization dedicated to waste management services. GG Wastech Pvt. Ltd. emphasize the utilization of sustainable resources, reducing reliance on non-renewable sources. Since our incorporation in February 2021, GG Wastech Pvt. Ltd. responsibly disposed of over 2.5 lakh tons of waste and created more than 50 job opportunities across organized and unorganized sectors.

GG Wastech Pvt. Ltd. comprehensive offerings encompass AFR supply, Biomining of legacy waste, EPR execution, Construction of SLF, Industrial waste disposal, and logistic services. Our waste management solutions ensure not only sustainable disposal but also include in-house waste processing infrastructure. This infrastructure supplies improved-quality materials to our target industries, effectively addressing the waste crisis, conserving fossil fuels, reducing carbon footprints, and promoting sustainable fuels.

GG Wastech Pvt. Ltd. commitment to environmental sustainability drives us to provide innovative waste management solutions that benefit businesses and the planet alike.

Best Practices

- The overview of our innovative sustainable waste management practices includes:
- Connecting waste generators with cement plants and delivering processed waste
- Providing End-to-End Solutions from waste sourcing to disposal
- Ensuring sustainable disposal of waste through AFR services
- Promotion of Sustainable Fuels



Pre-processing



- Equipping ourselves with a well-established waste treatment setup to facilitate easy AFR utilization for cement plants
- Ensuring seamless waste transportation with an efficient in-house logistic facility
- Approaching the establishment of a Cluster-Based Pre-Processing Facility for supply optimization and resource utilization.



GG Wastech Pvt. Ltd., remain committed to revolutionizing waste management practices with our innovative, sustainable, and corporate-responsible solutions.



Screening machine



सीएसआईआर- एम्प्री
CSIR-AMPRI

CSIR-AMPRI, Bhopal

Winner

Category: Excellence in Research Labs/Industry/Academics Institution



About the Company

Advanced Materials and Processes Research Institute (AMPRI), Bhopal was instituted in May 1981 as “Regional Research Laboratory” (RRL) and officially started functioning from CSIR, New Delhi. The institute was then shifted to Bhopal and was located in the then Bhopal (now Barkatullah) University campus. It subsequently found a place in the present premises in December 1983; the premise which was originally built to accommodate a Cooperative Training College. The laboratory initially had about 15 scientists, with 10 of them specializing in metallurgy/materials science. This was the core strength of the institute at that time.

The institute carried out projects on the synthesis and characterization of aluminum-graphite metal matrix composites and natural fibres. Gradually the scope of R&D broadened to include waste to wealth (building materials and wood substitute), mineral processing, environmental impact assessment, water resource modelling and problems related to agricultural, mining, sugar mill and thermal power plant machinery components. Health assessment, improvement and failure analysis of engineering components/systems and development of lightweight materials/components/products and processes for the automobile sector constituted other activities of significance. The work was extended with FEM simulation and modelling which became an integral part of the studies in many cases. Through its activities on water resource modelling, surface treated agricultural implements, bell metal artefacts, handicrafts using sisal fibre, use of fly ash for agricultural soil reclamation, etc., it became visible as a promising institute for rural technologies specific to problems related to the state of Madhya Pradesh.

Best Practices

Red Mud into Lead Free Radiation Shielding Materials

X-ray and gamma ray shielding materials are the inevitable part of civil construction in X-ray diagnosis, computerized tomography (CT) scanner, Cath labs, dental X-rays, bone mineral density (BMD), sterilization plants, radiotherapy bunkers, nuclear power plants, radioactive nuclide storage rooms, particle accelerators, etc., to protect public, patients and environment

from the radiation hazard. CSIR-AMPRI has converted red mud into economically viable X-ray and gamma ray shielding materials as an alternative of toxic lead. Red mud is a hazardous alumina industrial waste. Globally 170 million tons of red mud have been generated annually and left unused in the disposal plants due to inadequate technologies for the large scale utilization of it. Although, ≈ 700 various applications of red mud has been patented, till now only 3-4% of red mud is used to fabricate useful products. As it has 30 – 55% of Fe_2O_3 , which is suitable for radiation shielding application, CSIR-AMPRI has converted the hazardous red mud into radiation shielding materials. In particular, CSIR-AMPRI has developed X-ray shielding tiles through ceramic route by adding certain weight percentage of high Z materials and clay binder. The developed tile possess the flexural strength of 32 N/mm² and the breaking strength of 3000N. The 13.5 mm thick tile possess the attenuation equivalent to 2mm lead at 100 kV. And none of the heavy elements were found to leach out of the tiles above the permissible limit. These tiles can be used to build radiation shielding structures in diagnostic X-rays, CT scanner room, cath labs, bone mineral density, dental X-rays, etc., instead of toxic lead sheet. Know-how for the fabrication of “Lead Free X-ray Shielding Tiles” was transferred to M/s Prism Johnson Ltd., and the tiles are currently available in the market with the brand name of Jonson Endura (Figure a). The developed tiles are used in Indian Navy (INS, Kattabomman, Tirunelveli, Tamil Nadu), Ministry of defence (Figure b), Jagadguru Kripalu Chikitsalaya, Mathura, UP, M/s Saideep Healthcare and Research Pvt. Ltd., Ahmednagar, Maharashtra.

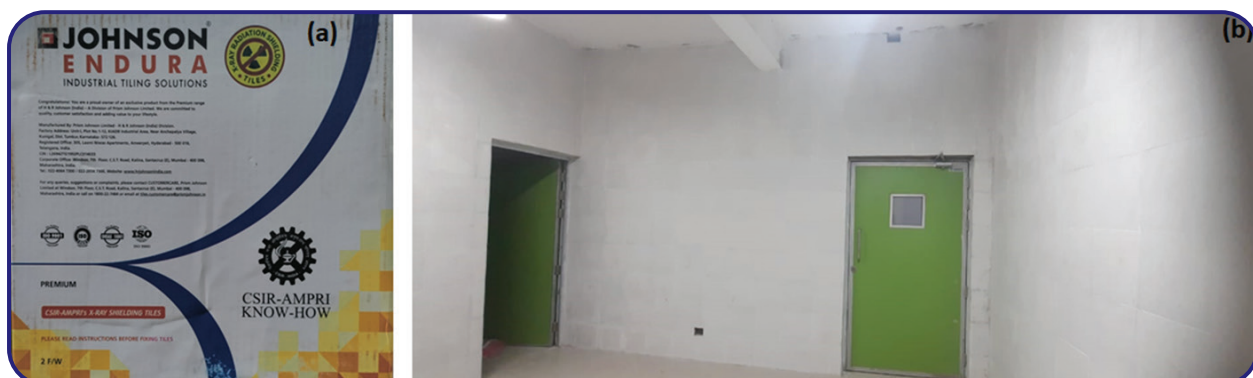


Figure: a) The package of radiation shielding tiles and b) the X-ray room made using CSIR-AMPRI's X-ray shielding tiles at INS Kattabomman.

The red mud based X-ray shielding tiles developed by CSIR-AMPRI are an economically viable alternative of toxic lead and are 30% cheaper than lead. These tiles can be paved by the skilled labors. Developed tiles are more durable, maintenance free, easily repairable, and thermally stable and consumes less space as compared to brick and concrete walls. Moreover the utilization of such secondary resources will reduce the environmental pollution, deforestation and mining. Alumina industries are spending Rs. 900/ton for the safe disposal of red mud. It will reduce Rs. 1.7 billion worth import of toxic lead. CSIR-AMPRI is further working on the development of gamma and neutron shielding materials, which are suitable for building nuclear power plants, cancer treatment bunkers, hot cells, particle accelerators, sterilization plants, etc.



CCRT Laboratories

Runner Up

Category: Excellence in Research Labs/Industry/Academics Institution



About the institute

CCRT Laboratories is specialized Refractory and Civil materials testing laboratory and has infrastructure and experienced manpower to take care of refractory issues faced by Cement, Concrete, Steel, Petrochemical, Ceramic, Boiler & Power Plants, Chemical, and Mineral Industries. CCRT Laboratories are only privately held Refractory testing laboratory in India. CCRT Laboratories are ISO/IEC 17025:2005 certified organization and are there in this field for quite long time. Organization was founded in the year of 2003 by the personnel in this field with cumulative experience of decades. By specializing in refractories engineering consulting, refractories inspections, refractories testing and refractories quality assurance, CCRT Laboratories helps refractory end-users make cost-effective and timely decisions when it comes to capital projects and planned or unplanned refractory repairs and maintenance.

Best Practices

CCRT Group devoted to the construction industry wanted to resolve the long pending issue of construction debris and hence came out with many innovative products including readymade plaster from construction debris for repairs and restoration applications.

To improve impact on various aspect of ecology (Circular Economy/Environmental Sustainability) was the major aim of this innovation and thereon to give a green and sustainable product to the industry which is commercially viable and technically superior that made from natural resources. Following targets are achieved due to this innovation.



Received Debris



Debris Crusher



- USE of construction debris to help the Govt / bodies / agencies to manage waste.
- Cost of these readymade plaster is equivalent to the available in market.
- Dependency on Natural Sand is no more. (safeguard rivers from dredging of sand)
- Water requirement for curing drops down by 30% + (saving of natural resource)
- Made in India ECO friendly Product. (reduction in carbon footprint)
- Re-development project debris management can be achieved as its solution for the same.
- Helps in saving mangroves and ecology. (arresting the indiscriminate disposal)
- Its good candidate as green construction product thus can be used in green building concept also.
- Economic than the regular products thus save cost of construction.





CSIR-Indian Institute of Chemical Technology, Hyderabad

Award of Merit

Category: Excellence in Research Labs/Industry/Academics Institution



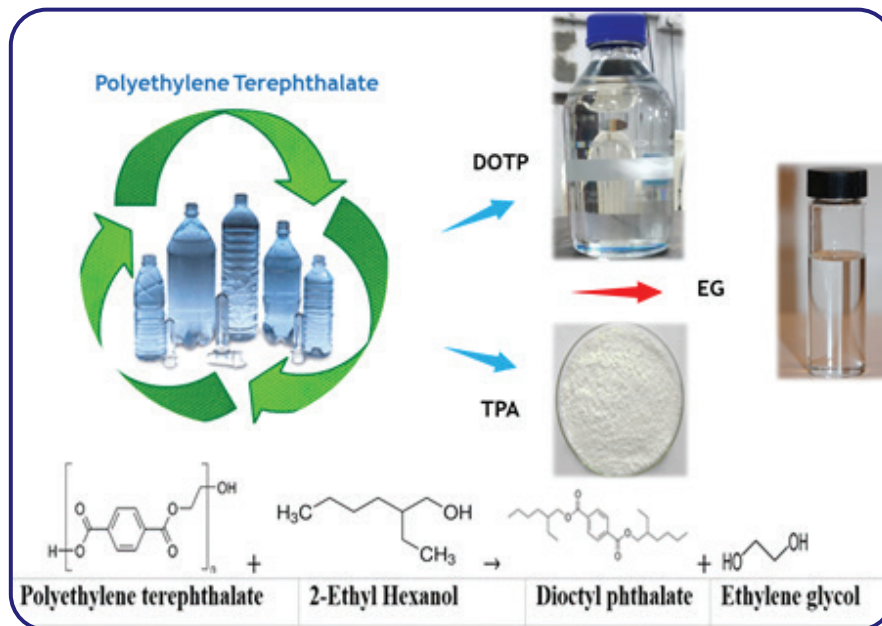
About the Institute

Plastic waste is a major environmental problem and needs to be addressed. The current disposal methods of plastics include recycling, landfilling, and incineration. Finding ways to recycle or convert it into useful products is crucial for a sustainable future. Among the different plastics, Polyethylene terephthalate (PET) semi-aromatic polyester is used extensively for packaging with its biggest application being in fibers (in excess of 60%), with bottle production accounting for about 30% of global demand. The global PET compound annual growth of 7% is expected in forthcoming years as it has rapidly grown from 6.5 million tons in 2000 to 30.4 million tons by 2025. At the end life cycle of PET, it does not readily decompose in natural environments. Therefore, to control and reduce plastic waste, source reduction can be implemented utilizing principles of waste plastic management (reuse, recycle, redesign, and recycle packaging) in combination with packaging innovations. PET can be upcycled or recycled in different ways (a) By re-extrusion (b) by mechanical recycling (c) by Chemical recycling (d) energy recovery/incineration. The major issues with re-extrusion and mechanical recycling are the heterogeneity of the PET waste and the deterioration of the product properties each time it is recycled. Additionally, mechanical recycling results in the reduction of the molecular weight or intrinsic viscosity, by thermal and hydrolytic degradation. Compared with other recycling methods, chemical recycling is the only method that conforms to 'sustainability' principles because it produces original raw materials. Post-consumer PET bottles can be chemically recycled into plasticizers via esterification or transesterification to dioctyl phthalate (DOP) and dioctyl terephthalate (DOTP) respectively. Presently due to the toxicity and non-degradable nature of DOP in the environment, the European Union (EU) has banned it and suggested the utilization of DOTP (Isomer of DOP) which is green and suitable for the environment because doesn't belong to harmful phthalates.

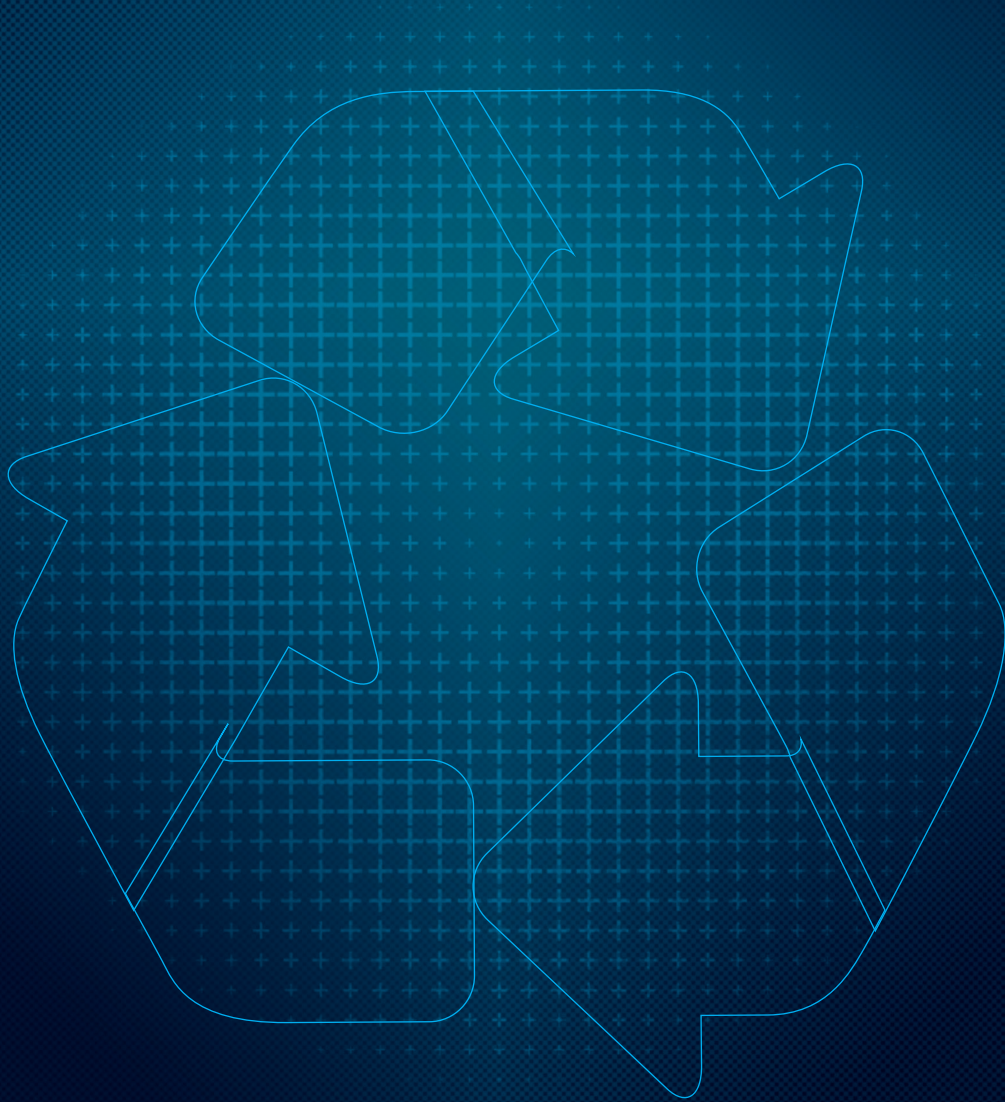
Best Practices

At CSIR-IICT, a process has been developed for depolymerization of Post-consumer PET waste to green DOTP plasticizer. This includes process parameters design, optimization, and process data collection for commercial plant design (500 MT/month). The process includes by-product

utilization and effluent stream treatment. Formulation and characteristics evaluation of the developed green plasticizer has been established for material molding to enhance the tensile and flammability properties and a comparison has been made with the existing plasticizer.



**PROFILES OF RECEIPTS OF
'APPRECIATION' FOR CII 3R
AWARDS 2023**





INDIA'S LEADING COMPANIES IN
MANAGING WASTE



Bisleri International Pvt. Ltd.

Appreciation

Category: Excellence in 3R By Industry managing own waste & Excellence in Best Practices in managing Plastic & Packaging waste - PIBOs



About the company

Bisleri International Pvt. Ltd. established in the year 1969, leading manufacturer of packaged drinking water with 133 plants across country. Bisleri stands true to its promise of providing safe, pure and healthy mineral water to customers for the last 54 years and is No1 most trusted brand.

Bisleri International Private Limited is committed to sustainability and has integrated it into its business strategy. The company focuses on creating solutions that drive growth while addressing environmental issues, with the aim of creating a greener future for all. Bisleri has been recycling plastic since the '90s and is passionate about plastic circularity. To fulfil its commitment, Bisleri has implemented various programs in recycling, water conservation, and sustainability. These efforts have enabled the company to achieve plastic neutrality and water positivity, making it one of the first FMCG companies to do so. Bisleri ensures that it recycles more plastic than it consumes and replenishes more water than it uses in its business operations.

Best Practices

Bottles For Change

In 2018, Bisleri launched the 'Bottles for Change' program to raise awareness about recycling used plastic. The program aims to educate people on responsible disposal and ensure that plastic is sent for recycling. Bisleri advocates a 3-stage process of cleaning and segregating plastic at the source and providing collection infrastructure. The program has had a positive impact, changing the behaviour of over 8,00,000 individuals, and reaching various corporates, educational institutions, and housing societies. Bottles for Change Program in officially partnered with 17 Municipal Corporations and collected more than 8,500 MT of used plastic and send for recycling. Bisleri has also developed a user-friendly mobile app for public to join to this initiative and do registration and locating nearby plastic agents. The program promotes sustainability and creates employment opportunities for rag pickers, aggregators, and recyclers

who repurpose plastic into valuable items like apparels, bags, and utility items. Additionally, plastic can be upcycled into products like benches and paver blocks.

NAYI Umeed:

Project NAYI UMEED is an initiative that focuses on conserving rainwater by building and restoring Check Dams. Bisleri undertook its first Check Dam project in 2001 at Village Bara in Kutch, Gujarat. Since then, the project has helped irrigate over 16,000 acres of land, turning barren lands into fertile farms. As a result, per farmer's average income per acre per annum has increased to Rs. 4,50,000/-.



Bottle for Change

The project has helped harvest nearly 25,000 million litres of water, covering more than 124 villages and benefiting almost 46,500 family members. With its efforts in rainwater harvesting, Bisleri has replenished 1.08 litres of water for every litre drawn from the ground. Bisleri is Water Positive Company.



NAYI UMEED Reservoir, LEH

Greener Promise - 2025 Target

Our CSR initiatives are aligned with the Sustainable Development Goals, such as; 3 Good Health & wellbeing, 6 Clean water & sanitation, 9 Industry, Innovation and Infrastructure, 11 Sustainable Cities and Communities, 12 Responsible Consumption and production, 13 Climate Action, 14 Life below water, 15 Life on Land, 17 Partnerships for the goals.

Products



Bisleri plans to extend the Bottles for Change program to cover 20 major cities and collect and recycle 12,500MT of plastic by 2025. Project NAYI UMEED is to construct or restore 350 check dams across India. Also, the organization is focusing on harvesting over 35,000 million litres of water and irrigating over 23,000 acres of land. This will help over 65,000 members of families and provide them access to clean water for cultivations, sanitation, and hygiene.



Balrampur Chini Mills Ltd.

Appreciation

Category: Excellence in 3R By Industry managing own waste



About the company

Balrampur Chini Mills Limited founded in 1975, is one of the largest sugar manufacturing company in India. It is one of the first sugar companies in the country to diversify its business from sugar to distillery and cogeneration. With a deep and profound sectorial understanding, the Company's innovative approach to manufacturing has enabled it to successfully create a wide range of co-products ranging from Molasses, Alcohol, Ethanol and Bagasse to Power Generation. The Company's aspirations and vision are led by Mr Vivek Saraogi. He is the former President of the Indian Sugar Mills Association and has also worked as committee member of FICCI and the Indian Chamber of Commerce in Kolkata. His stewardship enabled the Company to soar to new heights. The Company possesses a cane crushing capacity of 77,500 tonnes per day, distillery capacity of 1050 KL per day and saleable co-generation capacity of 175.7 megawatts.

Best Practices

The wastewater (Surplus Sugar Condensate) from sugar mills has significant content of Chemical Oxygen Demand (COD), Biochemical Oxygen Demand (BOD), Dissolved solids including Sulphates (traceable), Suspended solids etc.

The stream as common condensate from all sugar evaporators (FE & FF) with pH range 6.80 -7.80 & 36±2.0°C temperature is taken to the equalization tank to ensure proper homogenization with the help of fine air bubble diffusers and supplemented of the effluent by automatic (DCS controlled) dosing system for nitrogen & phosphate content.

The aerobic biological treatment consisting of aeration tank and secondary clarifier with sludge recycle system is to reduce the organic matter content and BOD/COD content upto 500 mg/ltr. Aeration tank is equipped with fine bubble diffused aeration system and air blowers to supply air.

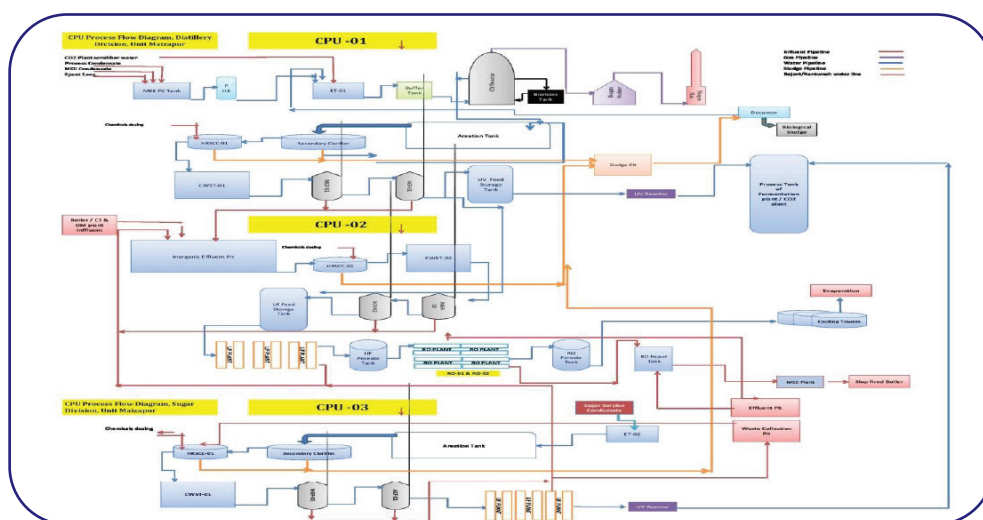
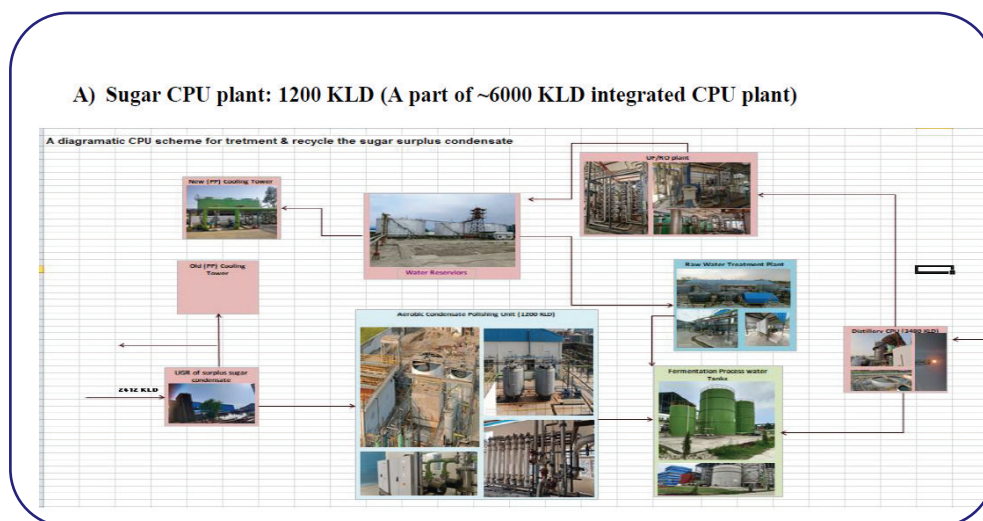
Diffused aeration system offers high efficiency aeration and removal of pollutants followed by Secondary Clarifier.

The treated effluent from aerobic system via secondary clarifier goes to stilling chamber for reacting with coagulant and flocculant chemicals and after mixing effluent goes to HRSCC-03 (High Rate Solid Contact Clarifier) for removal of suspended solids from the effluent.

The treated water from HRSCC is stored in clear water tank (CWST). And the clear water is passed through MGF (Multi Grade Filter) and ACF (Activated Carbon Filter) for pre-polishing water.

Final polishing treatment in the form of Ultra-Filtration unit (1200KLD) is provided. The fully treated final effluent is stored in a fermentation process storage tank of adequate capacity and used for dilution of sugarcane syrup and molasses in fermentation house of the distillery plant.

Sludge generated from the system is dewatered through sludge decanter. The decanted sludge is used as manure in agriculture farm and the centrate water is recycled further in CPU process.





INDIA'S LEADING COMPANIES IN
MANAGING WASTE



Orchid Pharma Limited

Appreciation

Category: Excellence in 3R By Industry managing own waste



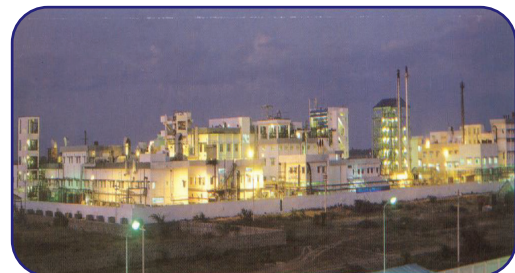
About the Company

Orchid Pharma Limited established in 1992 as an export-oriented unit (EOU), Orchid Pharma Ltd. (Orchid) is a vertically integrated company spanning the entire pharmaceutical value chain from discovery to delivery with established credentials in research, manufacturing and marketing. A multi-therapeutic presence across segments like anti-infective, anti-inflammatory, central nervous system (CNS), cardio vascular segment (CVS), nutraceuticals and other oral and sterile products. Our API manufacturing facility is located in a notified pharmaceutical industrial estate developed by SIDCO, Government of Tamil Nadu at Alathur, Chengalpattu district.

Best Practices

The company specializes in the manufacturing of life saving bulk drugs such as cephalosporin antibiotics. The raw materials involved are various types of solvents, acids, alkalies, catalysts, organic and inorganic compounds. The processes involved in manufacturing of all these products are of typical organic reactions in aqueous or solvent bases. The most common steps involved are addition of raw materials, stirring, quenching, layer separation etc. After these steps, the other important steps are extraction, centrifugation, filtration, crystallization, and drying.

Our integrated business model enables us to cater to business opportunities throughout the value chain, from research to delivery of drugs across therapeutic segments. Our niche product basket helps us maintain an edge over our peers in the markets where we are present. In the years to come, driven by highly competent and motivated team, Orchid Pharma Limited will move from strength to strength in the key domains of API, and global generics.





IIT Mumbai

Appreciation

Category: Excellence in Research Labs/Industry/Academics Institution



About the Institute

Established in 1958, the second of its kind, IIT Bombay was the first to be set up with foreign assistance. The funds from UNESCO came as Roubles from the then Soviet Union. In 1961 Parliament decreed the IITs as 'Institutes of National Importance'. Since then, IITB has grown from strength to strength to emerge as one of the top technical universities in the world.

The institute is recognised worldwide as a leader in the field of engineering education and research. Reputed for the outstanding calibre of students graduating from its undergraduate and postgraduate programmes, the institute attracts the best students from the country for its bachelor's, master's and doctoral programmes. Research and academic programmes at IIT Bombay are driven by an outstanding faculty, many of whom are reputed for their research contributions internationally.

Best Practices

IIT Bombay is developing sustainable construction materials – building blocks and mortars/plasters using Construction and Demolition (C&D) wastes and industrial biproducts respectively. Trials are being conducted at laboratory scale, tested for the products' characteristics including physical, mechanical, durability and carbon emissions.

The first part of the work was manufacturing building blocks (named as 'eco bricks') out of demolished construction waste within IIT Bombay campus, with minimal energy and resource consumption, tested for their properties, and were extensively used for new construction within the campus. The C&D waste was crushed to form aggregates and were made into bricks with minimal amount of cement binder (thus eliminated the need for high temperature firing). This is implemented campus-wide in form of parapets, benches, and sheds, and a single storey recreational space. The second part (named 'green binder'), which



Eco bricks during the manufacturing process



Pilot structure constructed inside IIT Bombay campus completely using the eco bricks

is ongoing, is the utilization of industrial byproducts with lime to create sustainable binders which absorb carbon dioxide from the atmosphere for their hardening mechanism. Red mud and slag are two industrial residues, former from the aluminium industry and latter from steel plants. These wastes face the disposal challenge and are usually landfilled.

The work attempts to reuse these materials for developing sustainable or low carbon cements. The porous nature of red mud-lime binders will keep the interiors thermally comfortable thereby reducing the energy burden on residents. The addition of GGBFS is observed to achieve enough strength for

the making of building blocks. These porous and sustainable blocks and plasters would enable the residents to live in a thermally comfortable and CO₂ free environment. Concisely, the work tries to reuse the industrial byproducts in making sustainable binders and reduce the CO₂ and energy use in buildings.

Thus, the two parts of the work contribute in a major way in:

- (a) Reducing the extraction, and transportation of fresh aggregates
- (b) Recycling the C&D waste and industrial byproducts to new construction materials
- (c) Reusing them in the most optimized way, in saving the planet from CO₂ emissions in a significant way



Plasticycle

Plasticycle Green Foundation

Appreciation

Category: Excellence in innovative solutions by start-ups for Sustainable Waste management



About the company

Plasticycle Green Foundation is a section 8 company incorporated in July 2022.

The main objective of Plasticycle Green Foundation is to reduce the plastics waste. Currently, Plasticycle Green Foundation focusing on Nonwoven Polypropylene (PP) wastes. Plasticycle Green Foundation have developed a technology to recycle/upcycle the PP nonwoven waste into value added products. India produces more than 5 lakhs MT of nonwoven PP per year. This nonwoven PP is used to produce various products for healthcare, household, geotextile, construction etc.



Some of the examples of these products are personal protective equipment kit, mask, salon gowns, bags, tea bags, sanitary napkins and baby diapers. All this products are used for single time afterwards ended in waste stream. The Current waste disposal methods for PP non-woven products are incinerated or land filled. Plasticycle Green Foundation are the first one to recycle PP nonwoven wastes and converted into useful agricultural and automotive components.

Plasticycle Green Foundation have successfully recycled Covid-19 waste such as PPE kit, Masks and converted into valuable products out of it. Our technology partner is CSIR National Chemical Laboratory, Pune, India. Plasticycle Green Foundation is a manufacturer of specialty Recycled Polypropylene (rPP) formulated pellets. Plasticycle Green Foundation are providing rPP formulation pellets with MFI values varying from 3 to 120 g/10min. Plasticycle Green Foundation can match mechanical properties suited for a given application. Plasticycle has been cofounded by a team of polymer processing experts with backgrounds from premier institute like CSIR-NCL and is mentored by an eminent Board of Advisors.

Deccan Crest Engineering Pvt. Ltd.

Appreciation

Category: Excellence in innovative solutions by start-ups for Sustainable Waste management



About the company

Deccan Crest Engineering Pvt. Ltd. is a trailblazing startup that has emerged as a driving force in the realm of sustainable waste management, with a primary focus on foundry sand reclamation. With a commitment to environmental stewardship and innovative solutions, the company has carved a niche for itself in the foundry industry by revolutionizing waste management practices.

At the core of Deccan Crest's mission is the development and implementation of cutting-edge technologies for foundry sand reclamation. The startup's engineering team, comprising experts in materials science and environmental engineering, has devised state-of-the-art processes to effectively recover and rejuvenate used foundry sand. Through advanced sorting, cleaning, and refining methodologies, they ensure that reclaimed sand meets the highest industry standards, ready for reuse in new casting processes.

Best Practices

The sustainable practices championed by Deccan Crest extend beyond the environmental benefits. By promoting foundry sand reclamation, the startup empowers foundries to significantly reduce their reliance on virgin resources. This not only translates to substantial cost savings but also conserves precious natural resources, contributing to the circular economy principles.

One of the standout aspects of Deccan Crest's approach is its emphasis on collaboration. The startup actively engages with foundries in the Kolhapur region, encouraging knowledge exchange and understanding the unique challenges faced by each facility. This collaborative approach enables the customization of solutions, making the sand reclamation process efficient and tailored to the specific needs of individual foundries.



Mechanical Reclamation Plant

Moreover, Deccan Crest Engineering's commitment to sustainability goes beyond its core operations. The startup invests in research and development to continuously improve its reclamation techniques, striving to minimize energy consumption and waste generation in its processes. In conclusion, Deccan Crest Engineering Pvt. Ltd. stands as a beacon of sustainable waste management in the foundry sector.



Chemical Reclamation Plant



*Reclaimed green sand
(Reclaimed using Mechanical Reclamation process)*



*Reclaimed Core sand
(Reclaimed using Thermal Reclamation process)*



*Reclaimed CO2sand
(Reclaimed using Mechanical Reclamation process)*



JBM Environment Management Private Limited



Appreciation

Category: Excellence in managing Municipal Solid waste by Private firms

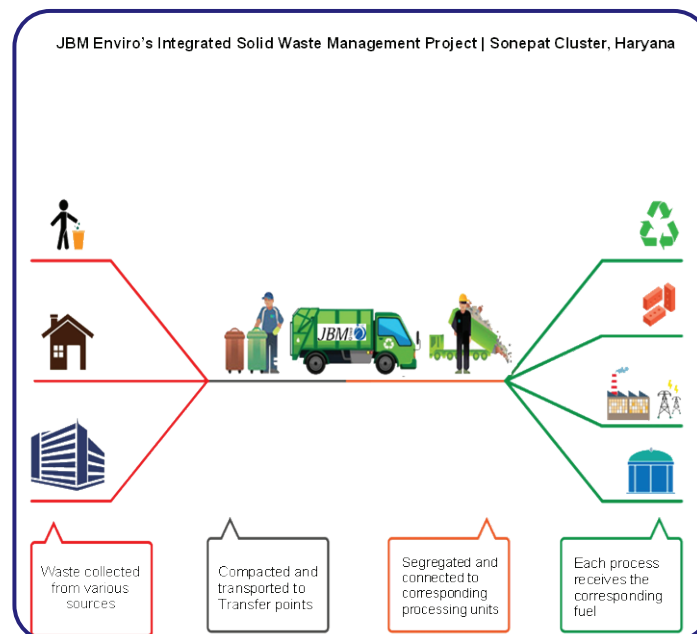


About the company

With recent thrust on electrification of mobility India is on the verge of mobility revolution not only in passenger car segment but also in public transportation. Our eco-friendly buses are being recognized for their state of the art technology and enhanced safety & comfort of the commuters. JBM are on a growth trajectory for our buses business.

JBM Environment Management Private Limited are committed towards providing holistic solutions to our customers and catering towards society at large and not just our base line. Giving back to the society and assisting in nation building is of utmost importance to us.

Best Practices



Step 1 (Door-to-Door collection):

JBM Enviro deploys more than 400 vehicles for Collection & Transportation (C&T) of Municipal Solid Waste (MSW) in the 4 Cities of Sonapat Cluster (including the cities of Sonapat, Panipat,

Samalkha and Gannaur) with over 700 manpower. Through its activities, JBM Enviro caters to more than 12 lac citizens, living in these cities.

JBM deploy the requisite vehicles and perform C&T operations in view of the requirements of geographical area to be served within respective Cities, especially for congested areas & every region in the city. Our workers are dressed as per rules, are courteous and operate the C&T works in prescribed manner.

Typically, TATA ACE (capacity 1.3 tons) are deployed for primary C&T and we operate door-to-door from households and / or market areas till Secondary Points ('SCP') / Transfer Stations ('TS'). All our vehicles has partitions for dry & wet waste, follow prescribed route-maps and operate strictly at pre-informed timings. The vehicles carrying MSW are always covered. JBM have deployed limited number (on test basis) of e-vehicles and plan to gradually enhance such vehicles in our C&T operations.

The wet / organic waste is collected and transported separately to the composting plants – Vermi compost and/or Mechanical compost. JBM also provide the necessary support and jointly operate alongwith the Municipal Corporations of Sonapat and Panipat for these compost plant(s).

Step 2 (Segregation: Transportation till Secondary Collection Points ('SCPs') / Transfer Stations ('TS')):

At the SCPs / TS, the segregation of waste is carried out with help of machines, manual labour, JCBs and other equipment, the valuable material are recovered and waste is processed / dumped further.

In the process of sorting, all the valuables discovered are extracted and sent for re-processing. The Material Recovery Facilities (MRF) are operated and maintained by JBM Enviro.

From the SCPs / TS, secondary vehicles (compactors with capacity up to 14 tons) are deployed.

Step 3 (Processing Plant(s)):

The segregated MSW is transported to the JBM's processing facility located at Sonapat.

At its WtE Plant, JBM Enviro processes approx 650 TPD of MSW and convert it to power 8 MW and other valuables such as compost, bricks etc. The power generated from our plant is supplied to the State owned grid and other valuables are sold to different parties. JBM has developed the state of the art facility at Sonapat and deploys Martin (incineration) technology with a flue gas cleaning system, and a complete mechanised system for the Rankine cycle. JBM employs more than 200 manpower in its WtE Plant.

JBM Enviro's Vehicles, SCPs and TS are cleaned regularly and all its workers medically checked. JBM regularly conducts community awareness programs to promote source segregation and community cleanliness in general public,

Nashik Waste Management Private Limited



Appreciation

Category: Excellence in managing Municipal Solid waste by Private firms



About the company

Nashik Waste Management Pvt. Ltd. (NWMPL) is a state-of-the-art Integrated Solid Waste Management (ISWM) facility in Nashik. The company was founded in 2017, and since then, NWMPL has successfully become a model ISWM project for solid waste management across India.

Best practices

Citing improper waste management, the National Green Tribunal (NGT) had forced the Nashik Municipal Corporation to stop all construction activities in Nashik, for around a period of 1 year. Post this, Nashik Waste Management Pvt. Ltd. (NWMPL) bagged the order in Nov 2016 through tendering process. NWMPL turned the situation around with our expertise. The existing dump was spread over 22-23 acres; NWMPL turned it into a concised, fully functional, state-of-the-art waste management facility. Our MSW management project has been recognised as a role model by the Maharashtra Urban Development Mission Directorate. The Director of SBM, Ministry of Housing and Urban Affairs (MOHUA) and many other dignitaries, including Director of NEERI, Nagpur, have appreciated the efforts of NWMPL.

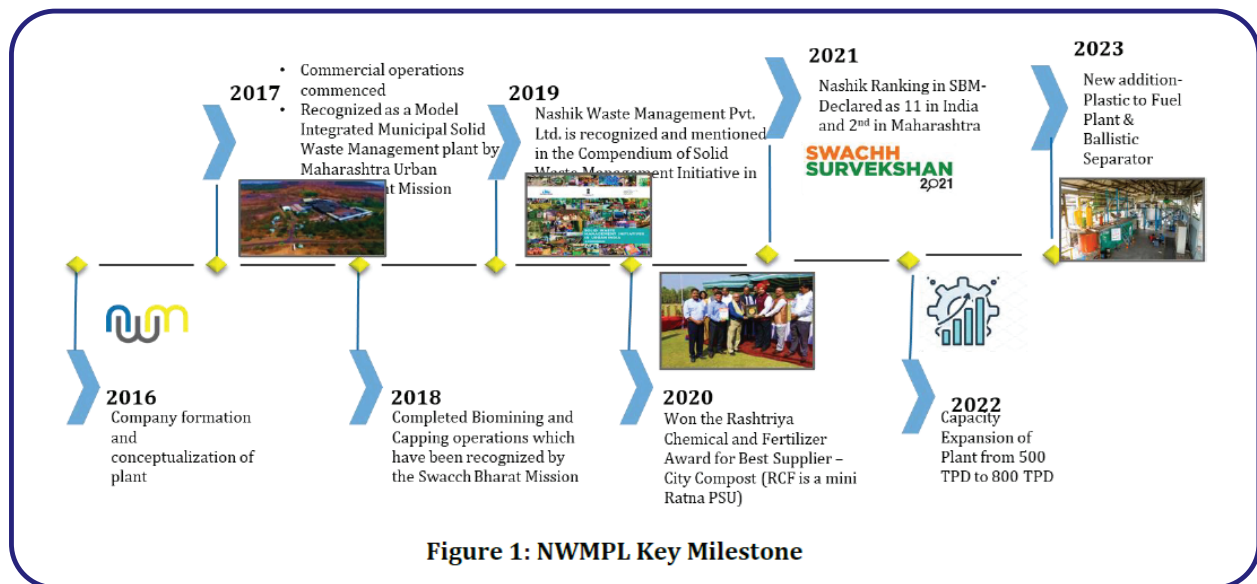


Figure 1: NWMPL Key Milestone

NWMPL, continuously strives to improve the existing system for composting and RDF by additional equipment like vibro screens, ballistic separator and twin shaft shredder.

Briquetting plant and plastic to Fuel plant has been added to ensure proper disposal of horticulture and segregated plastic waste.

NWMPL is always thinking of innovative ideas keeping in mind the sustainability factor. Very shortly will use the entire roof top of the existing sheds and capped area of legacy waste for setting up 4 MW solar power plant. NWMPL also intend to start a Training Institute exclusively for training of Urban Local Body staff and run courses for individuals so that they can easily get employment in upcoming MSW treatment projects. Briquetting plant and plastic to Fuel plant has been added to ensure proper disposal of horticulture and segregated plastic waste.





INDIA'S LEADING COMPANIES IN
MANAGING WASTE



Gencrest Bio Products Private Limited



Appreciation

Category: Excellence in yielding Zero/ Minimum Waste Products



About the Company

Incepted in the year 2017, our journey at samta began with a small step of 'thoughtful innovation' in a short span the group has pushed boundaries accomplishing many first spanning mines and mineral renewable energy, fintech, biology and blockchain & artificial intelligence our philosophy is very clear if Gencrest extract from the nature and also replenish it. Gencrest, a part of the Samta Group is a fully integrated research and innovation driven Agri Solution Company, with its headquarter and R&D center in Mumbai and manufacturing unit with one more R&D facility in bhasuwal.

Best Practices

Gencrest are using research and development to push boundaries and create sustainable solution for the farmers across the globe.

Gencrest focus is on innovation platform like proven research precision agriculture green and sustainable solution for plant and soil health. Gencrest's proprietary range of product portfolio helps farmers to practice profitable agriculture by providing increased crop productivity, improved efficiency of conventional fertilizer and a reduced environmental footprint a company is amongst the best supplier of organic manure, nano fertilizer biological microbial within India and has created a niche in the crowded segment.





Products





INDIA'S LEADING COMPANIES IN
MANAGING WASTE



Eila



Eco friendly Pencil

Bilva Enterprises

Appreciation

Category: Excellence in yielding Zero/ Minimum Waste Products



About the Company

The world's ecosystem is suffering and need to make an active effort to make lifestyle changes for the environment. All our products provide a simple eco-friendly adjustment to our daily routine which allows us to improve our environmental health.

Bilva is an Indian based company in Karnataka that creates and sources only high-quality products, so that you can feel confident making feel-good choices. They all have a minimal carbon footprint and promote general wellbeing.

Our Motto

Bilva Enterprises are here to lead the society in the different aspects of products which will never harm nature. Mostly our products stand supporting NATURE. Bilva Enterprises are hiring & encouraging the WOMEN in our locality with our handmade products which will be helpful for them to support their home FINANCIALLY while carrying out their routine life JOYFULLY.

Vision

- Bilva Enterprises do produce all eco-friendly products to save & serve the nature.
- A step to save Nature, Bilva Enterprises are in way to serve for our nature
- Wealth from Waste in Form of Products

Best practices

Bilva have implemented a comprehensive waste management strategy aligned with the principles of the CII 3R categories. Through these efforts, we aim to contribute to a sustainable and environmentally conscious future.

Bilva Enterprises believe that sharing these details will not only showcase our commitment to effective waste management but also contribute to the collective knowledge and advancements in sustainable practices within the industry.

Insight into the Best Practices

- Disposal problems are reduced by using waste paper to produce new product.

- Using recycled paper reduces the need for primary raw materials.
- Recycling of newsprint saves about 1 tonne of wood.
- It has been estimated that recycling half the world's paper would avoid the harvesting of 20 million acres (80,000 km²) of forestland.
- Energy consumption is reduced by recycling.
- Calculations show that recycling one ton of newspaper saves about 4,000 KWh of electricity. This is enough electricity to power a 3- bedroom Indian house for an entire year.
- Recycling 1 tonne of newspaper eliminates 3 cubic meters of landfill.
- Recycling paper decreases the demand for virgin pulp and thus reduces the overall amount of air and water pollution associated with paper manufacture.

The plant has a zero waste system where the leftover papers are made into pouches, red dot disposable pouches of different sizes and are regularly sold to medical shops, grocery shops and are also made and distributed to schools, colleges, malls and public washrooms. Red dot sanitary waste disposal bags is for disposal of sanitary waste, sanitary pad, baby diaper, other sanitary waste. Dispo Bags are used to dispose of soiled sanitary pads. Each bag is marked with Red Dot. This helps the rag pickers to segregate it from other waste easily.

Effective waste management is crucial for maintaining a sustainable and healthy environment. One of the best practices is through initiatives such as promoting the use of reusable products, encouraging responsible consumption, and implementing waste reduction programs.

Education and awareness campaigns are regularly conducted in various communities, in public places such as parks, walking tracks, schools, and colleges in fostering a culture of responsible waste management among individuals and communities.

Joined hands with various NGOs, businesses, and individuals to create a circular economy where waste is minimized, and resources are reused and recycled, contributing to a more sustainable and environmentally friendly future.

Products

- News Paper Pencils
- News Paper Seed Pencils
- Paper Covers
- Paper Bags
- Coconut shells





The Coca-Cola Company

Appreciation

Category: Excellence in Best Practices in managing plastic & Packaging waste - PIBO



About the Company

Coca-Cola in India is one of the country's leading beverage companies, offering a range of healthy, safe, high-quality, refreshing beverage options to consumers across the country. The Company along with its owned bottling operation and other bottling partners, through a strong network of over 2.6 million retail outlets, touches the lives of millions of consumers, at a rate of more than 500 servings per second. The Coca-Cola India system provides direct employment to 25,000 people and indirect employment to more than 150,000 people.

Best practices

Coca-Cola India has demonstrated a steadfast commitment to implementing sustainable practices that contribute to waste reduction and foster a circular economy. Coca-Cola recognize our responsibility to help solve complex plastic waste challenges facing our planet and society. That's why, in Jan 2018, The Coca-Cola Company announced its bold and ambitious commitment, World Without Waste (WWW), to drive systemic change through a circular economy for our packaging. World Without Waste is a global sustainable packaging platform focused on measurable and interconnected goals, each of which are supported by additional targets:



1. Making 100% of our packaging recyclable globally by 2025—and using at least 50% recycled material in our packaging by 2030 (DESIGN);
2. Collecting and recycling a bottle or can for each one we sell by 2030 (COLLECT);
3. Bringing people together to support a healthy, debris-free environment (PARTNER).

Anchored by a holistic perspective, Coca-Cola India has made significant strides in waste reduction. In 2022 alone, the company successfully collected 100 % of the equivalent PET bottles that were introduced into the market.



In terms of packaging formats, Coca-Cola India is dedicated to making all its packaging more sustainable. From plastic reduction to maximizing recyclability and recycled content, the company is diligently working across different packaging aspects to reduce environmental impact.

Lightweighting remains a top priority, Coca-Cola have implemented lightweighting technology incorporating a recyclable, ultrathin glassy coating. Our 250ml tiny-but-mighty Affordable Small

Sparkling Package (ASSP) is the world's lightest-weight, best-performing bottle and is 100% recyclable. Through use of technology, Coca-Cola achieved 40% weight reduction in ASSP - from 15.8gm to 9.6gm. Coca-Cola have also started expanding the distribution of Returnable Glass bottles (RGBs), inputting more glass and also putting marketing behind it. Coca-Cola are also working on expanding aseptic PET lines which are much more efficient. 99.3% of our packaging in India is recyclable currently. However, Coca-Cola are constantly looking for innovative solutions to design, develop and promote recyclable solutions for the remaining 0.7%. Coca-Cola are also working on transparent packaging and converting sleeves to labels for the bottles to further optimize plastic usage and promote circularity.

Furthermore, Coca-Cola India recently launched its new 100% rPET bottle for water - a significant milestone as it is the first time that a packaging made of 100% recycled plastic is used for food or beverages in India. Demand for recycled PET plastic for food-grade applications currently exceeds supply, so are working with communities to boost PET recycling and collection; collaborate with recycling partners; and secure rPET to help ensure material for our bottles is used again and again. Coca-Cola have also taken the target to reduce virgin plastic usage. Through our various initiatives and reduced 50,000 MT of virgin plastic use in our packaging in last 2 years.



Coca-Cola System in India, along with partners is working to develop sustainable, community-led programs for integrated plastic waste management and promote efficient recycling in India. Through our various initiatives, Coca-Cola seek to create awareness about segregation of waste at source, streamline collection mechanisms and help build infrastructure to recycle postconsumer packaging into value-added products. These initiatives will also create better livelihoods and enhance social security for the marginalized waste workers in the existing largely informal economy.



Confederation of Indian Industry

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering Industry, Government and civil society, through advisory and consultative processes.

CII is a non-government, not-for-profit, industry-led and industry-managed organization, with around 9,000 members from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 300,000 enterprises from 286 national and regional sectoral industry bodies.

For more than 125 years, CII has been engaged in shaping India's development journey and works proactively on transforming Indian Industry's engagement in national development. CII charts change by working closely with Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness and business opportunities for industry through a range of specialized services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues.

Extending its agenda beyond business, CII assists industry to identify and execute corporate citizenship programmes. Partnerships with civil society organizations carry forward corporate initiatives for integrated and inclusive development across diverse domains including affirmative action, livelihoods, diversity management, skill development, empowerment of women, and sustainable development, to name a few.

As India strategizes for the next 25 years to India@100, Indian industry must scale the competitiveness ladder to drive growth. It must also internalize the tenets of sustainability and climate action and accelerate its globalisation journey for leadership in a changing world. The role played by Indian industry will be central to the country's progress and success as a nation. CII, with the Theme for 2023-24 as 'Towards a Competitive and Sustainable India@100: Growth, Inclusiveness, Globalisation, Building Trust' has prioritized 6 action themes that will catalyze the journey of the country towards the vision of India@100.

With 65 offices, including 10 Centres of Excellence, in India, and 8 overseas offices in Australia, Egypt, Germany, Indonesia, Singapore, UAE, UK, and USA, as well as institutional partnerships with 350 counterpart organizations in 133 countries, CII serves as a reference point for Indian industry and the international business community.

Confederation of Indian Industry

The Mantosh Sondhi Centre
23, Institutional Area, Lodi Road, New Delhi – 110 003 (India)
T: +91 11 45771000 • E: info@cii.in • W: www.cii.in

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